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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/591,746	06/12/2000	Shun Zheng Yu	4555-103 US	3607

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EXAMINER

DINH, KHANH Q

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 10/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,746

Applicant(s)

YU ET AL.

Examiner

Khanh Dinh

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-29 is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-29 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Foc et al., US pat. No.6,421,781.

As to claim 1, Fox discloses a method for providing at least one pull service and at least one push service to a plurality of mobile users (106 and 176 fig.2) comprising the steps of:

reducing access latency for said at least one pull service running on at least one Web server (Web server 207 fig.2) by prefetching documents into a cache of at least one proxy gateway (114 fig.2) by using at least one factor relating to a frequency of access of said plurality of mobile users (106 or 176 fig2) to

said pull content of said pull service, an update cycle of said pull content (i.e., using web server to update pages, see col.6 lines 26-61) and response delay for fetching said pull content from said at least one Web server to at least one proxy gateway, said at least one proxy gateway connected between said mobile user and said Web server (see abstract, figs.1, 2, col.4 lines 9-63 and col.5 line 7 to col.6 line 61).

iteratively estimating a state of each of said plurality of mobile users for determining push content to be forwarded to said mobile user by said at least one push service running on said at least one Web server (see col.7 line 6 to col.8 line 56 and col.11 lines 15-61).

As to claim 2, Fox discloses pull content is plurality of documents (plurality of web pages in URL table of fig.3) and said step of reducing access latency comprises the step of selecting a predetermined number of documents to be prefetched into said cache of said proxy gateway, wherein said predetermined number of documents have the greatest reduction in said access latency (see col.6 line 26 to col.7 line 67).

As to claim 3, Fox discloses using factor of said frequency of access wherein frequently accessed documents are prioritized for being stored in a cache of a proxy gateway, said proxy gateway being connected between said mobile user and said pull service and push service (see fig.2, col.5 line 26 to col.7 line 67 and col.10 line 27 to col.11 line 61).

As to claim 4, Fox discloses using factor of said update cycle wherein said pull documents having a shorter update cycle are prioritized for being stored into a cache of a proxy gateway said proxy gateway being connected between said mobile user and said pull service and push service (see fig.2, col.5 line 26 to col.7 line 67 and col.10 line 27 to col.11 line 61).

As to claim 5, Fox discloses using factor of said response delay wherein said pull documents having a longer response delay are prioritized for being stored in a cache of a proxy gateway, said proxy gateway being connected between said mobile user and said pull service and push service (see fig.2, col.5 line 26 to col.7 line 67 and col.10 line 27 to col.11 line 61).

As to claim 6, Fox discloses reducing access latency comprises the step of selecting a predetermined number of documents to be prefetched into cache of a proxy gateway, and said step of selecting a predetermined number of documents uses said factors, said frequency of access, said update cycle and said response delay, wherein said frequently accessed pull documents having a shorter update cycle and a longer response delay are prioritized for being prefetched in said cache of said proxy gateway, said proxy gateway being connected between said mobile user and said pull service and push service (see fig.2, col.5 line 26 to col.7 line 67, col.8 lines 10-56 and col.10 line 27 to col.11 line 61).

As to claim 7, Fox discloses tracking data of said plurality of mobile users and geo-location measurement and behavior observation data (see fig.5, col.5 line 26 to col.7 line 67 and col.12 line 16 to col.13 line 62).

As to claim 8, Fox discloses caching mobility and behavior-related push content into a cache of said proxy gateway connected between said plurality of mobile users and said at least one Web Server (see fig.2, col.5 line 26 to col.7 line 67, col.8 lines 10-56 and col.10 line 27 to col.11 line 61).

As to claim 9, Fox discloses each state of one of said mobile users is determined from at least one of the following factors: location of said one of said plurality of mobile users, direction of said one of said

plurality of mobile users, speed of said one of said plurality of mobile users, and behavior of said one of plurality of mobile users (see fig.5, col.5 line 26 to col.7 line 67 and col.12 line 16 to col.13 line 62).

Claims 10-14 are rejected for the same reasons set forth in claims 1, 2 and 7-9 respectively.

Allowable Subject Matter

4. Claims 15-29 allowed.

5. The following is a statement of reasons for the indication of allowable subject matter:

For independent claim 15, none of the cited prior art discloses a system comprising a proxy gateway connected by a first network to a plurality of mobile users and by a second network to at least one Web server, said proxy gateway comprising a cache for storing pull content received from said at least one Web server of a pull service, a method comprising a combination of steps of: determining access probability of access to said pull content from said stored data, determining an average hit rate for said pull content from said stored data, determining said average response delay for said pull content from said stored data determining average wired network access latency for said pull content from said access probability, said average hit rate and said average response delay, storing said pull content in said cache based on said determined average wired network access latency when there is no said pull content in said cache or said pull content has expired.

For independent claim 25, none of the cited prior art discloses a system comprising a proxy gateway connected by a first network to a plurality of mobile users and by a second network to at least one Web server, said proxy gateway comprising a cache for storing pull content received from said at least one Web server of a pull service, a method comprising a combination of steps of: computing a first probability that the measured geo-location position and behavior is an actual position and behavior of each of

mobile users, determining a state sequence estimation variable for each of said mobile users by iteration over time from a second probability that each of said mobile transit in a geo-location and behavior sequence and determining a current state for each of mobile users from said state sequence estimation

Other prior art cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - a. Adams et al., US pat. No.5,873,100.
 - b. Logue et al., US pat. No.5,935,207.
 - c. Malkin Et al., US pat. No.6,085,193.
 - d. Boyle et al., US pat. No.6,119,167.
 - e. Hassett et al., US pat. No.6,173,311.
 - f. Deo et al., US apt. No.6,393,481.
 - g. Smith, US pat. No.6,604,104.

Conclusion

7. Claims 1-14 are *rejected*.
8. Claims 15-29 are allowed.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Dinh whose telephone number is (703) 308-8528. The examiner can normally be reached on Monday through Friday from 8:00 A.m. to 5:00 P.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam Hosain, can be reached on (703) 308-6662. The fax phone numbers for this group are:

Official: (703) 872-9306

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Non-Official/ Draft: (703) 746-5510

A shortened statutory period for reply is set to expire THREE months from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned (35 U. S. C. Sect. 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(A).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305 -9600.



HOSAIN ALAM
SUPERVISORY PATENT EXAMINER

Khanh Dinh
Patent Examiner
Art Unit 2155
9/26/2003